

REMARKS/ARGUMENTS

Claims 1-27 are pending in the application. Claims 1, 10, and 19 have been amended to expedite prosecution. Claims 28-30 have been cancelled. Reconsideration is respectfully requested. Applicants submit that the pending claims 1-27 are patentable over the art of record and allowance is respectfully requested of claims 1-27.

Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tandon (U.S. Patent No. 6,233,587) in view of Holenstein et al. (U.S. Pub. No. 2004/0133591) and further in view of Kleewein et al. (U.S. Patent No. 5,953,719) and further in view of Bodamer et al. (U.S. Patent No. 6,226,649). Applicants respectfully traverse, but, in order to expedite prosecution, Applicants have amended claims 1, 10, and 19.

Amended claim 1 describes registering said user-defined operation and Transaction Protocol Interfaces used by said user-defined operation with a database, wherein said user-defined operation enables a database operation to be extended with user-customizable features, and wherein said computer resource accessed by said user-defined operation is external to said database. Said database transaction is executed, wherein said database transaction includes both said user-defined operation and one or more database operations (e.g., Specification, page 4, lines 27-29). Said database is enabled to operate as said Transaction Manager by means of said Transaction Protocol, wherein said Transaction Manager manages distributed transactions by coordinating decisions about commit or rollback of pending transactions and coordinating failure recovery. Said resource manager is accessed by said database operating as said Transaction Manager. Said user-defined operation is invoked as part of said database transaction, wherein said user-defined operation is invoked by user-defined query code external to said database. With said database, it is recorded that said user-defined operation has been invoked to enable triggering said database to invoke said Transaction Protocol Interfaces during commit and rollback (e.g., Specification, page 11, lines 1-5). Said invoked and recorded user-defined operation is executed while said database transaction is executed. Said computer resource is accessed in response to executing said invoked and recorded user-defined operation by said resource manager, thereby extending said database transaction. In response to performing a

commit of said database transaction, coordinating a two phase commit of said database and of said computer resource accessed by said user-defined operation by said database invoking said Transaction Protocol Interfaces (e.g., Specification, page 11, lines 1-5). In response to performing a rollback of said database transaction, including said user-defined operation in said rollback by said database invoking said Transaction Protocol Interfaces to roll back said computer resource (e.g., Specification, page 11, lines 1-5). The results of said database transaction that includes both said user-defined operation and said one or more database operations are atomic and are either completed with the commit or rolled back, wherein said user-defined operation accesses said computer resource that is external to said database (e.g., Specification, page 4, lines 27-29).

Applicants respectfully submit that the combination of the cited references do not teach or suggest the subject matter of amended claims 1, 10, and 19. For example, the cited references do not teach or suggest executing a database transaction, wherein said database transaction includes *both said user-defined operation and one or more database operations* and *wherein results of said database transaction that includes both said user-defined operation and said one or more database operations are atomic and are either completed with the commit or rolled back, wherein said user-defined operation accesses said computer resource that is external to said database*. There is no teaching or suggestion in the combination of cited references for providing atomic results such that a database transaction that includes both said user-defined operation is either completed with a commit or rolled back.

In addition, Applicants respectfully submit that the combination of the cited references do not teach or suggest, for example, invoking said user-defined operation as part of said database transaction that includes both said user-defined operation and said one or more database operations, wherein said user-defined operation is invoked by user-defined query code external to said database; recording with said database that said user-defined operation has been invoked to enable triggering said database to invoke said Transaction Protocol Interfaces during commit and rollback; executing said invoked and recorded user-defined operation while executing said database transaction that includes both said user-defined operation and said one or more database operations; accessing said computer resource in response to executing said invoked and recorded user-defined operation by said resource manager, thereby extending said database transaction; in response to performing a commit of said database transaction that includes both said user-

defined operation and said one or more database operations, coordinating a commit of said computer resource accessed by said user-defined operation by said database invoking said Transaction Protocol Interfaces; and, in response to performing a rollback of said database transaction that includes both said user-defined operation and said one or more database operations, including said user-defined operation in said rollback by said database invoking said Transaction Protocol Interfaces to roll back said computer resource, wherein results of said database transaction that includes both said user-defined operation and said one or more database operations are atomic and are either completed with the commit or rolled back.

The Tandon process does not address the problem of providing atomicity for a database transaction that includes both a user-defined operation and one or more database operations, where the user-defined operation accesses a computer resource external to said database. The Holenstein, Kleewein, and Bodamer references do not cure the defects of the Tandon patent.

Thus, claims 1, 10, and 19 are not taught or suggested by the Tandon, Holenstein, Kleewein, and Bodamer references, either alone or together.

Dependent claims 2-9, 11-18, and 20-27 incorporate the language of independent claims 1, 10, and 19 and add additional novel elements. Therefore, dependent claims 2-9, 11-18, and 20-27 are not taught or suggested by the Tandon Holenstein, Kleewein, and Bodamer references, either alone or together, for at least the same reasons as were discussed with respect to claims 1, 10, and 19.

Conclusion

For all the above reasons, Applicants submit that the pending claims 1-27 are patentable over the art of record. Applicants have not added any claims. Nonetheless, should any additional fees be required, please charge Deposit Account No. 09-0460.

The attorney of record invites the Examiner to contact her at (310) 553-7973 if the Examiner believes such contact would advance the prosecution of the case.

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